

# Quendall Terminals Site, Renton, Washington

## RCRA Listed Hazardous Waste Review

### 1.0 Introduction

EPA has completed a review of information regarding the former operational areas of the Quendall Terminals Site to identify where RCRA listed hazardous waste codes would be applied to remediation waste generated during future remedial actions at the site. There are two listed waste codes that are potentially applicable to creosote manufacturing sites: 1) U051 Creosote (commercial chemical product) and 2) K035, Wastewater treatment sludges generated in the production of creosote. After review of regulatory information, available site historical information, and Remedial Investigation (RI) results, the listed waste codes are applicable to the following areas at the Quendall Terminals Site:

- U051 - Remediation waste generated from the former Trestle/Tank Car Loading area
- U051 - Remediation waste generated from the former May Creek channel area
- K035 – Remediation waste generated from the footprint of the former North Sump
- K035 – Remediation waste generated from the footprint of the former South Sump

The following sections provide a summary of the regulatory and Quendall Terminals Site information that was considered during this review for each of the two listed waste codes (U051 in Section 2.0 and K035 in Section 3.0). The sections begin with regulatory definitions followed by brief (bulleted) findings related to the Quendall Site for each of the two listed waste codes. Site information was obtained from the September 2010 draft of the RI Report (Anchor QEA and Aspect 2010).

### 2.0 Review of Listed Hazardous Waste Code - U051

#### 2.1 Definitions

The following regulatory definitions are provided for the U051 listed hazardous waste code – Creosote:

40 CFR 261.33 Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.

*(d) Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.*

*[ Comment: The phrase “commercial chemical product or manufacturing chemical intermediate having the generic name listed in . . .” refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraph (e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraph (e) or (f), such waste will be listed in either §261.31 or §261.32 or will be identified as a hazardous waste by the characteristics set forth in subpart C of this part.*

RCRA ‘actively handled’ (57 FR 37194, 37298; August 18, 1992):

*In some instances, a waste may have been disposed of prior to becoming subject to hazardous waste regulation (e.g., a waste disposed prior to the effective date of the original Subtitle C regulations). Regardless of when a waste was generated or when it was disposed, any waste that exhibits a characteristic of hazardous waste or meets a hazardous waste listing description is a RCRA Subtitle C hazardous waste; the determining factor is whether the waste is "actively managed" on or after the date that the waste becomes subject to hazardous waste regulation (57FR 37194, 37298; August 18, 1992). The term active management means physically disturbing wastes within a waste management unit or disposing of additional hazardous waste in existing units containing previously disposed wastes*

Creosote production at the Quendall Terminals Site ended in 1969. Plant structures were reported to be demolished in 1971. Based on this, a RCRA listed waste designation would apply to remediation waste generated during the remedial action (i.e., when it is "actively handled" at which point the remediation waste would 'contain' the listed hazardous waste) from identified areas of the site.

## 2.2 Site History and Information from the Remedial Investigation (RI)

The following information is summarized from the RI Report documenting the site history of creosote production, product storage, and physical identification of coal tar (raw material) in comparison to creosote (product).

### Site Operational Timeline

- 1917-1969 – creosote production
- 1969-1983 – site also stored petroleum products from in aboveground storage tanks (ASTs) – light nonaqueous phase liquid (LNAPL) not documented during the RI
- 1975-2009 – site was also a log sorting and storage yard

### Physical Characteristics of Creosote and Coal Tar

- Creosote and coal tar are both dense nonaqueous phase liquids (DNAPLs); RI Table 2.1-1 presents range of primary constituents in creosote and coal tar; RI Table 4.2-1 has site specific data for DNAPL samples.
- Physical/visual difference – creosote is more fluid than coal tar; coal tar visually looks like a thick (viscous) tar substance.
- Coal tar contains concentrations of benzene, toluene, ethylbenzene, xylenes (BTEX) (up to 5%); where there have been documented spills of coal tar (near the shoreline/T-dock area), BTEX in groundwater is more prevalent along the shoreline.
- Coal tar produced three products at the Quendall site (light end, mid end (creosote) and heavy end (pitch)); pitch is more similar to creosote (no BTEX) but has higher molecular weight PAHs.

### Product Tank Storage Areas

- Light-end and mid-end (creosote) products were stored in ASTs 1-5 and 31-34; pitch product was solidified in the Still House.
- ASTs 23 and 26 held coal tar (raw material) and oils; ASTs 35-38 held waste oils and creosote products.
- Product tank cleanout wastes (solids) were placed near the ASTs; liquids were discharged to the sanitary sewer and conveyed to former May Creek.

### Areas of the Site Where Operations Were Primarily Focused on Creosote Product (and not Coal Tar Raw Material)

- Former Trestle/Tank Car Loading area (for loading creosote product into rail cars)
- Former May Creek channel area (creosote from Still House condenser leaks); residues from AST cleaning operations (ASTs held creosote products).

- Pipeline to former Baxter facility (for conveying creosote product to adjoining facility).
- Former production building (Still House) and adjoining product storage (Tanks 1-5).

### 2.3 Summary of U051 Listed Hazardous Waste Review

Based on review of the site history, production areas, and RI information, the RCRA listed waste designation U051 will apply to the following areas of the Quendall Terminals Site:

- Remediation waste generated from the former Trestle/Tank Car Loading area
- Remediation waste generated from the former May Creek channel area

It was determined that insufficient information and uncertainty exists regarding the contaminant sources and site operations for both the pipeline to the former Baxter facility and the former Still House. Based on this, remediation waste generated from these two areas will not carry the U051 listed waste code.

## 3.0 Review of Listed Hazardous Waste Code - K035

### 3.1 Definitions

The following regulatory definitions are provided for the K035 listed hazardous waste code: K035 listed hazardous waste code - Wastewater treatment sludges generated in the production of creosote

40 CFR 260.10 Sludges - *means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.*

RCRA 'actively handled' (57 FR 37194, 37298; August 18, 1992):

*In some instances, a waste may have been disposed of prior to becoming subject to hazardous waste regulation (e.g., a waste disposed prior to the effective date of the original Subtitle C regulations). Regardless of when a waste was generated or when it was disposed, any waste that exhibits a characteristic of hazardous waste or meets a hazardous waste listing description is a RCRA Subtitle C hazardous waste; the determining factor is whether the waste is "actively managed" on or after the date that the waste becomes subject to hazardous waste regulation (57FR 37194, 37298; August 18, 1992). The term active management means physically disturbing wastes within a waste management unit or disposing of additional hazardous waste in existing units*

Creosote production at the Quendall Terminals Site ended in 1969. Plant structures were reported to be demolished in 1971. Based on this, a RCRA listed waste designation would apply to remediation waste generated during the remedial action (i.e., when it is "actively handled" at which point the remediation waste would 'contain' the listed hazardous waste) from identified areas of the site.

### 3.2 Site History and Information from the Remedial Investigation (RI)

In addition to the information provided in Section 2.2, the following information was provided in the RI documenting the site history of wastewater generation, composition, treatment and conveyance:

#### Wastewater Generation and Composition

- Liquid wastes from the Still House process units were conveyed to the North and South Sumps
  - effluent from Still House cooling lines containing liquid creosote and tars
  - condensate from steam condensate tubes in the stills (water containing distillates)
- Remedial action at the North Sump and South Sump removed DNAPL in 1970s/1980s
- Quendall Pond accepted overflow from the sumps before discharging to the lake; spills

- RI data reports high benzene concentrations (i.e., from coal tar residues) and DNAPL in the Quendall Pond area

#### Areas of the Site Where Operations Were Focused on Wastewater Treatment from Creosote Production

- North Sump
- South Sump
- Quendall Pond (overflow from the sumps before discharging to the lake; spills; RI data reports high benzene concentrations and DNAPL in the pond area)

### **3.3 Summary of K035 Listed Hazardous Waste Review**

Based on review of the site history, production areas and RI information, the RCRA listed waste designation K035 will apply to the following areas of the Quendall Terminals Site:

- Remediation waste generated within the footprint of the former North Sump
- Remediation waste generated within the footprint of the former South Sump

It was determined that insufficient information and uncertainty exists regarding the contaminant sources and site operations for the Quendall Pond area. Based on this, remediation waste generated from this area of the site will not carry the K035 listed waste code.

## **4.0 Reference**

Anchor QEA and Aspect, 2010. Draft Remedial Investigation, Quendall Terminals Site, Renton, Washington. Report prepared for J.H. Baxter & Company and Altino Properties by Anchor Environmental, LLC, Seattle, WA and Aspect Consulting, LLC, Seattle, WA. September 2010.